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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/731,889	12/07/2000	Shinji Isokawa	362-51	1026

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BODNER & O'ROURKE, LLP  
425 BROADHOLLOW ROAD, SUITE 108  
MELVILLE, NY 11747

EXAMINER

LOUIE, WAI SING

ART UNIT

PAPER NUMBER

2814

DATE MAILED: 03/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/731,889

Applicant(s)

ISOKAWA, SHINJI

Examiner

Wai-Sing Louie

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION*****Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-4 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 of U.S. Patent No. 6,180,962 in view of Glenn et al. (US 6,228,676).

With regard to claim 1, US 6,180,962 discloses a semiconductor light-emitting device comprising:

- A substrate (claim 1);
- A pair of electrodes, at least one of the pair of electrodes including an inner portion and an outer portion, the inner portion of the at least one of the pair of electrodes residing in the same plane as the outer portion of the at least one of the pair of electrodes (claim 1);
- A semiconductor light-emitting chip electrically connected to said pair of electrodes (claim 1);

- A mold encapsulating the semiconductor light-emitting chip, the mold encapsulating the inner portion of at least one of the pair of electrodes, the outer portion of at least one of the pair of electrodes extending substantially laterally beyond the mold (claim 1);
- A step formed in the inner portion of at least one of the pair of electrodes at an inside of said mold and having a height increasing from an outer side to an inner side of the mold (claim 1 and 5).

With regard to claim 2 and in according to claim 1 above, US 6,180,962 discloses the electrode includes a step, but does not disclose the electrode is a Cu layer and the step being formed by changing a thickness of the Cu layer. However, Cu is a well-known material for electrode such as disclosed by Glenn et al. (Glenn col. 2, line 67 to col. 3, line 1). Therefore, it would have been obvious to have a Cu layer as the electrode. Glenn et al. disclose a step formed by changing the thickness of the electrode (Glenn fig. 1).

With regard to claims 3 and 4, US 6,180,962, modified by Glenn et al. in claim 2 above, would disclose an Au layer formed in an uppermost layer of the electrode (Glenn col. 3, lines 4-8).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 2814

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohno et al. (US 5,227,662) in view of Ishinaga (US 5,936,264).

With regard to claim 1, Ohno et al. disclose a composite lead frame and semiconductor device (col. 3, line 25 to col. 7, line 30 and fig. 7) comprising:

- A pair of electrode, having an inner portion 12 and an outer portion 10, where the inner portion residing in the same plane as the outer portion (fig. 7);
- A mold 38 encapsulating the chip 34 and the mold 38 encapsulating the inner portion of the electrode 12 and the outer portion 10 extending substantially laterally beyond the mold 38 (fig. 7);
- A step 28 formed in the inner portion 12 of the electrode inside the mold 38 and the step 28 having a height increasing from an outer side to an inner side of the mold 38 (fig. 7);
- Ohno et al. do not disclose the IC chip is a light-emitting chip. However, it is common in the art to encapsulate a light-emitting chip with this method such as disclosed in Ishinaga (Ishinaga fig. 1). Therefore, it would have been obvious the IC chip could be an light-emitting chip.

With regard to claim 2 and in according to claim 1 above, Ohno et al. disclose the electrode includes a Cu layer (col. 7, lines 5-6) and the step being formed by changing the thickness of the Cu layer (fig. 7).

With regard to claims 3-4 and in according to claim 2 above, Ohno et al. disclose an Au layer formed in an uppermost layer (col. 6, lines 41-43).

Art Unit: 2814

*Response to Arguments*

Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new reference cited and new ground(s) of rejection.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wai-Sing Louie whose telephone number is (703) 305-0474. The examiner can normally be reached on 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (703) 308-4918. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

wsf

March 12, 2003

  
LONG PHAM  
PRIMARY EXAMINER